

Association for Information Systems AIS Electronic Library (AISeL)

Eleventh Wuhan International Conference on e-Business

Wuhan International Conference on e-Business

5-26-2012

Analysis of Overall E-Business Solution on Personalized Medical Care —— Taking Private Hospitals for Example

Leiyi Zhao

Management Faculty, Chengdu University of Information Technology, China, zhaoleiyicheng@126.com

Ning Yu

Management Faculty, Chengdu University of Information Technology, China

Xiaoyan Yang

Management Faculty, Chengdu University of Information Technology, China

Chunhao Huang

Management Faculty, Chengdu University of Information Technology, China

Zhun Liu

Management Faculty, Chengdu University of Information Technology, China

Follow this and additional works at: <http://aisel.aisnet.org/whiceb2011>

Recommended Citation

Zhao, Leiyi; Yu, Ning; Yang, Xiaoyan; Huang, Chunhao; and Liu, Zhun, "Analysis of Overall E-Business Solution on Personalized Medical Care —— Taking Private Hospitals for Example" (2012). *Eleventh Wuhan International Conference on e-Business*. 50.
<http://aisel.aisnet.org/whiceb2011/50>

This material is brought to you by the Wuhan International Conference on e-Business at AIS Electronic Library (AISeL). It has been accepted for inclusion in Eleventh Wuhan International Conference on e-Business by an authorized administrator of AIS Electronic Library (AISeL). For more information, please contact elibrary@aisnet.org.

Analysis of Overall E-Business Solution on Personalized Medical Care

——Taking Private Hospitals for Example

Leiyi Zhao¹, Ning Yu², Xiaoyan Yang², Chunhao Huang², Zhun Liu^{2}*

¹School of management and Economics, Beijing Institute of Technology, China

²Management Faculty, Chengdu University of Information Technology, China

Abstract: The patient is the lifeblood of the hospital and only win customers can win the future. When choosing a hospital, in addition to the strength of the medical treatment of the hospital itself, patients considering most are the services of the hospital which is the very factor that can influence customer making decision. Clearly, the needs of patients can't be achieved in overcrowded public hospitals. This paper starts from the content of E-Business, analyzes the current situation and problems of private hospital development, points out that development of E-Business to enhance customer relationship management is the only way to solve the practical problems of private hospitals, gives personal attention of private hospitals overall E-Business solutions and development strategies.

Keywords: E-Business solutions, personalized care, customer relationship management, private hospitals

1. INTRODUCTION

Roland Berger, a German consultant, believes that consumer demands, ordered by the importance are: convenience, necessary information, solution of individual problems, reception, and price advantage.

When choosing a hospital, in addition to the strength of the medical treatment of the hospital itself, patients considering most are the services of the hospital which is the very factor that can influence customer making decision. Clearly, the needs of patients can't be achieved in overcrowded public hospitals. Under the demand of qualification and facilitation of the consumer, private hospitals are developing rapidly. In recent years, private hospitals have formed a customer-centric management system, which greatly improved the convenience and the reception level of treatment, at the same time, private hospitals also established a tool-supported customer contact platform, providing customers with the necessary information and responds to questions. Consumers want their individual needs are being met personally, their feelings are continuing concern. In order to achieve this, private hospitals must realize a scientific and comprehensive customer relationship management system, and create a personalized-care E-Business platform.

2. CONTENTS AND DEVELOPMENT OF THE E-BUSINESS

2.1 Contents of the E-Business

E-Business refers to using computer technology, network technology and telecommunication technology to achieve the electronic, digitalization and networking in the entire business process. Meanwhile, E-Business is also a process using the digital information technology to optimize activities of enterprises continually.

IBM, a pioneer of the E-Business, believes that E-Business is the electronic to achieve all business activities using the Internet. E-Business broadly refers to using electronic tools to conduct business activities. IBM divided the development of E-Business into five stages: business intelligence, supply chain management, online sales and customer relationship management ^[1].

* Corresponding author. Email:zhaoleiyicheng@126.com(*Leiyi Zhao*)

2.2 Customer Relationship Management in E-Business Age

Customer Relationship Management is a kind of thought and technique to manage the customer relationship. The core of the Customer Relationship Management (e-CRM) in E-Business age is one to one. Segment customer base through electronic, realize the one to one marketing with different customers, understand the customer's individual needs and provide one to one personalized products and services.

E-CRM system is not just the CRM of browser mode, at the same time, "e" is a real E-Business which integrates internal and external resources of the company and customers together, it means that the enterprise value chain runs through this large E-Business to achieve electronic business.

3. STATUS OF DEVELOPMENT OF PRIVATE HOSPITALS

3.1 Private hospitals have achieved much

Current development of private hospitals in China is in a particular environment which opportunities and risks coexist. To survive in the cracks or to develop fast on the road of differentiation is the issue that private hospitals must discuss. ^[2]

According to the data of Xinhua, at the end of 2009, looked on the current situation of private hospital development, China now has more than 30 million of various medical institutions at all levels, including 130,000 non-public medical institutions and a total of 19,712 hospitals, in which public Hospitals are 16137, accounting for 88.86% of the total hospitals; private hospitals are 3575, accounting for 18.14%, shown as Figure1.

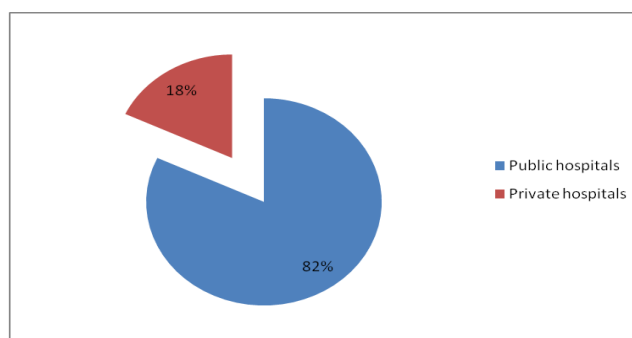


Figure 1. The number of public and private hospitals compared

Taking Chengdu as an example, there are currently 216 hospitals in total, of which there are 70 private hospitals, accounting for 32.5% of the total number of hospitals in Chengdu. In view of this situation, Blue-chip Creation conducted field surveys on service status of 41 private hospitals within the Second Ring, Chengdu.

In these 41 hospitals, there are 23 hospitals providing services of pre-treatment for the patient's, accounting for 56% overall, services are mainly include on-line consulting and telephone-based service to answer patients' questions. The number of hospitals providing services of post-treatment for patients is eight, accounting for only 19.5% overall, this kind of service is mainly telephone follow for patients.

On the current hospital services provided before treatment, 87% of the patients and their families think it is necessary. Because it can help patients solve the puzzle and facilitate the medical treatment. Survey shows that 56% of private hospitals put attention on this and provide a basic previous guidance of treatment for patients.

For customer service after the treatment, the current services provided by private hospitals only takes on 19.5%, however, the survey shows that patients are in a urgent need of services after the treatment, because the post-treatment services make them feel valued and cared by the hospital.

According to the survey, most of private hospitals are not really involved in the post-treatment service, take

the example of those 41 private hospitals within the Second Ring of Chengdu, currently, proportion of hospitals that provide post-treatment services is only 19.5%, and these treatment services, most of time, is a formality, not effective. Hospitals just do some random return visits, and do not form the norm or system^[4].

However, with the continuous improvement of quality of people's life, people have individual needs on services provided by hospitals. According to the survey, about 70% of patients want to receive personalized service and care offered by hospitals so that they feel they are respected.

3.2 Problems in development of private hospitals

Today the doctor-patient conflicts in public hospitals are unprecedented sharp, public and government are casting their eyes on private hospitals. The development of private hospitals is under great concern. However, there are many mishaps in the development of private hospitals. Poor internal control, low quality of services, weaker medical strength than that of public hospitals, bad faith and other issues, these problems are all put private hospitals into a development dilemma. There is only one road for the development of private hospitals, which transfers from the "Treatment-centered Road" into "Patient-centered Road", only improve the quality of service can enhance the development and e-CRM is just adapted to this trend, from the perspective of patients, providing personalized care, helping private hospitals solve problems, removing obstacles and boosting the development of private hospitals.

4. SOLUTIONS ON THE PERSONALIZED CARE OF E-BUSINESS

4.1 Solutions on the personalized care of E-Business

For new private hospitals continue to expand investment, the traditional concept of marketing is forced to change that no longer wait for the patients, but with the high-tech, to comprehensively understand the basic patient information, personal preferences, habits, living conditions and medical information, to improve patient satisfaction and loyalty, providing differentiated services for different patients. Once the patients are sick, this hospital will prove to be his (her) first choice.

Patients to seek hospital, although the price is very important, but certainly it is not the only factor considered to make a choice. What more important is the quality and services. And the present simple approach of services can not meet the diverse needs of patients. The only way to get out this obstacle is to build their own competitive advantage that peer can not imitate. Private hospitals need to develop a scientific customer relationship management program to improve the overall competitiveness of the hospital.

The overall solutions of personalized care of private hospitals achieve to integrate the hospital's official website, call centers and internal business of hospitals together which means to form a integration system of three networks of external network, Telecommunications network internal network to provide patients with personalized, full range of before, during, after the treatment integrated program.

Before treatment: hospitals provide patients with call center-based official website to offer online business about advisory, register and guide. During treatment: Hospitals conduct surveys on customers satisfaction on the point of contact, and the results incorporated into KPI assessment, forming a closed loop monitoring mechanism to help the hospital improve continually. After treatment: hospitals provide for patients with personal health pages, including personal information, online inquiry, personalized care and other customer management items to achieve online business.

4.2 The value of the personalized care of E-Business platform

What private hospitals should be to integrate the external and internal resources in hospitals, to provide

electronic support tools, to form a customer-centric service system, and to maximize the value of customer service and information flow.

① Service flow

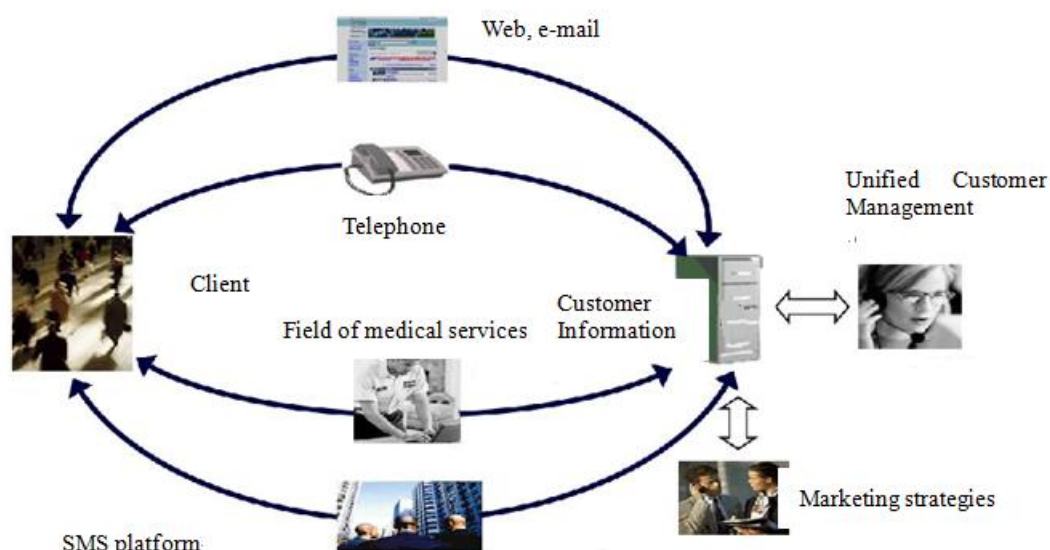


Figure 2. E-Business services flow in private hospitals

The overall solution of personalized care of private hospitals is to establish a customer-centered service system under the help of e-CRM, and through the multi-dimensional customer contact platform to achieve one to one customer contact and service management, shown as Figure 2.

② Information flow

The e-CRM of private hospitals is to establish a customer-centric database for information gathering and dissemination through the E-Business customer contact platform and the HIS system, performance appraisal system, CRM system provide background support, shown as Figure3.

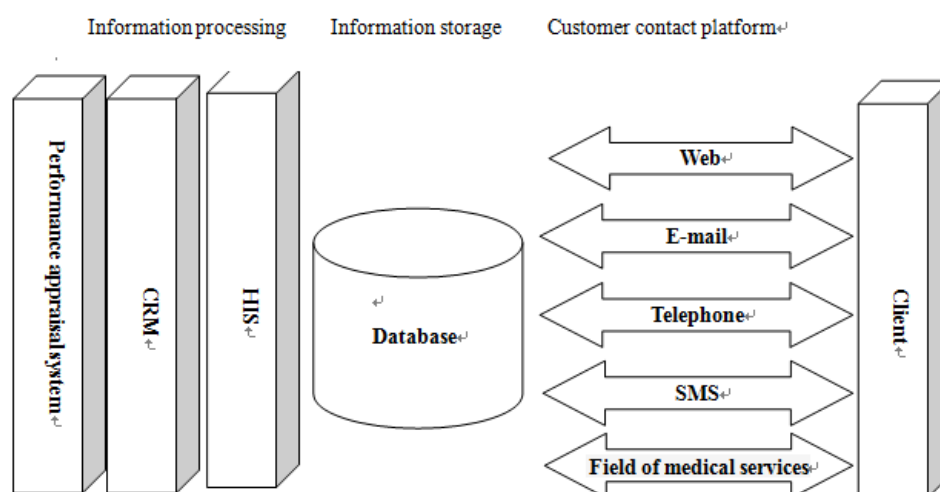


Figure 3. E-Business Information flow in private hospitals

5. STRATEGIES TO IMPROVE THE E-BUSINESS PLATFORM OF PERSONALIZED CARE OF PRIVATE HOSPITALS

5.1 Improve the integrated service system

The overall solution of personalized care of private hospitals is to provide timely responses and quality services for the acquisition and retention customers through the integration of e-services contact platform and the relationship between hospitals, shown as Figure 4.

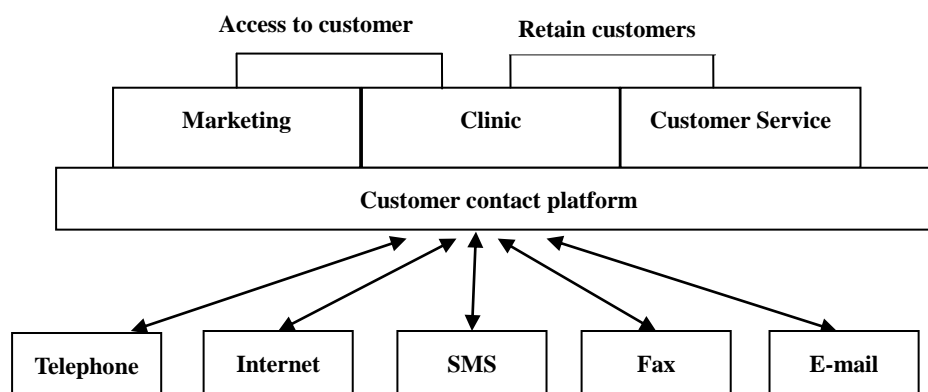


Figure 4. Integrated service system of private hospitals

5.2 Establish one to one learning relationship

Hospitals should form a one to one learning relationship with patients through E-Business customer contact platform. Hospitals are students and patients are teachers. Hospitals learn the information of the patient to understand the patient's needs and then to provide personalized services and feedbacks correction, so that the hospital-patient relationship will become more intimate in the interaction, shown as Figure 5.

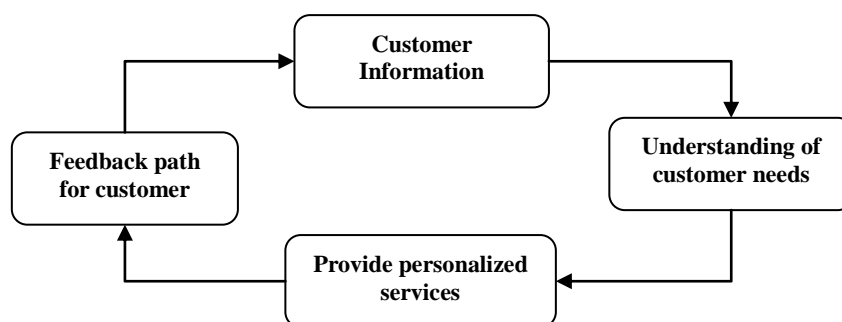


Figure 5. One to one learning relationships

5.3 Optimize the allocation of resources

The e-CRM system of private hospitals is to classify the level of patients and to provide differentiated customer retention strategies through the analysis of patient information, at the end to achieve the optimal allocation of resources, shown as Figure 6.

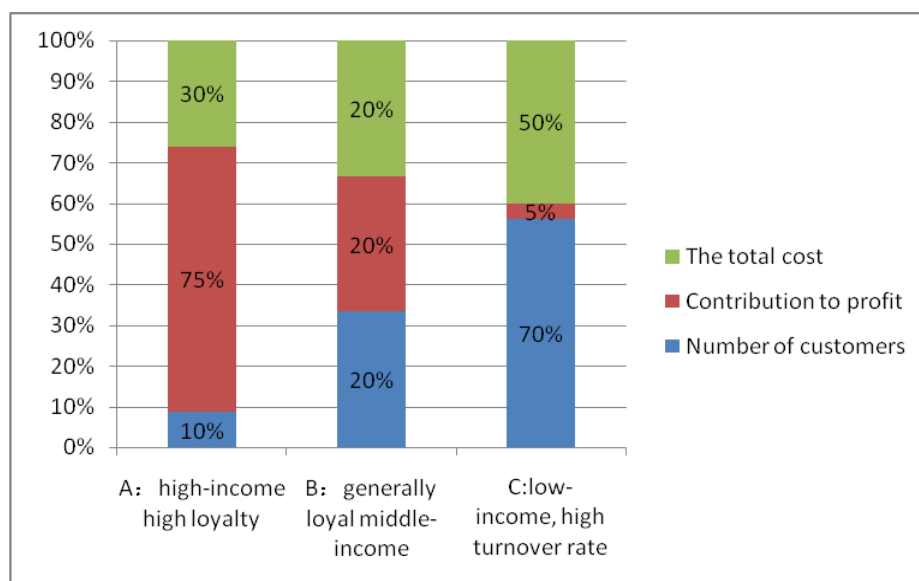


Figure 6. Private hospital resource allocation graphs

5.4 Promote SaaS model-based e-CRM system on the cloud computing platform

With the deepening of E-Business development, Internet technology has been developing rapidly and the application software become more mature. SaaS means Software-as-a-service which is an Internet-based application model to provide software services and a fully innovative model raised in the 21st century with the development of Internet technology and the mature of application software. It is the latest trend of the development of software technology^[3].

(1) The edge of SaaS model-based e-CRM system

① Analysis of users' point of view

A significant reduction of the cost of software silver light, a plug-in via, is used to extend single application software to thousands of users through the web browser. From the users' point of view, this means that they do not need invest on pre-authorization of software licenses or on the server.

② From the platform point of view - low maintenance costs

The promotion of SaaS model has dramatically reduced the using and maintenance costs of software, which makes it closer to customers, especially those of SME customers. The promotion of SaaS model will facilitate the widespread adoption of software products.

③ Compared with the conventional software service model, maintaining an application software is relatively cheaper and the risk of investment is relatively low.

(2) Characteristics of SaaS model-based e-CRM system

① Standardized customer contact management

The important ways to collect basic information of customers are the necessary preparation for the future customer segments and personalized care. The personalized care department of the hospital manages customer information and related customer service records, and persons in charge assign the related work to the file maintenance personnel or customer care personnel for management. The customer contact management should be standardized, and a patient database should be established to help hospitals manage customer data.

② Qualified personalized care system

After the segment of customer base, hospital departments (such as Client Department) formulate customer care strategies for different groups of customers respectively, and set mass short messages or system alerts, and by the way of SMS to automatically send health messages to patients.

③ A sound platform for complaints

Customers will reflect the service attitude of the hospital, sanitation, health quality and other problems to the hospital through the system, and the hospital will be received by the complaints department, which will investigate the facts and put forward solutions, related to leadership for approval, and give feedbacks to customers on the personal health page, the personal health page will examine whether the result is satisfied or not. The robust mechanism for handling complaints will improve patient satisfaction.

④ Complete KPI assessment system

The performance evaluation includes two parts: the satisfaction survey and KPI targets.

Satisfaction Survey: the evaluation result and attendance result of a Records Department and a staff will be calculated and then converted into KPI targets of each sector or position, ultimately is reflected in the performance appraisal, which managed by the attendance management personnel. The module consists of: department KPI assessment, staff KPI assessment, critical incident records, employee leave management and attendance results entry.

6. CONCLUSION

The overall solution of personalized care of private hospitals is greatly increases the ability of hospital customer relationship management, and greatly satisfies the patient's personalized demands, fully makes use of the combination value of three network, optimizes the hospital electronic business, broadens the channels of creating income, which is a new revolution of E-Business of hospitals.

REFERENCES

- [1] IBM, new opportunities at the E-Business age: business cloud platform, information and computer, 2011, 1.
- [2] Jiang Zhou. The application of third party transaction platform in the E-Business of small and medium enterprises, China business, 2010, 6.
- [3] Zhi Li, The full-process E-Business—blue ocean of SaaS, information and computer, 2010, 12.
- [4] Zhijun Han, Discussions of the development of E-Business of private enterprises, the wind of science and technology, 2011, 6.